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Research Bulletin

- Teachers View Public Relations 35
- Better Schools Cost More 41
- Educational Attainment in 1980 45
- Financial Incentives for Teachers 48
- How High Are Property Taxes? 53
- Teacher Supply and Demand 54
- State Rankings and National Trends 61

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Teachers View Public Relations

99 percent believe conferences with parents contribute to better relations, but only 40 percent use them

SCHOOL public relations has assumed vast importance in America's educational effort. The local public schools and the operation of them have traditionally been close to the American people. But today both educators and laymen realize more than ever before that only interested and well-informed citizens can arrive at workable solutions to the many problems facing our schools. This awareness of the importance of informed and intelligent lay participation in school problems and programs has called attention to the need for objective studies of school public relations.

As workers in school public relations have explored the processes involved, they have repeatedly held the role of the classroom teacher to be the most fundamental link in the entire process. Although the importance of the classroom teacher has been widely recognized, there have been no nationwide studies of the public relations activities of teachers.

Here are some salient findings of a nationwide survey of 3046 classroom teachers in urban school systems with 2500 population or more:

- Most teachers think of public relations as a means to stimulate the interest and participation of laymen in the school program. Only a few think the purpose should be to "sell" the educational program.
- About 83 percent of the respondents believe that their principals keep them adequately informed about school policies, school-board decisions, and possible trouble spots.
- Teachers regard visits to pupils' homes as constructive public relations techniques, but relatively few teachers make such visits a part of their program. Less than 10 percent of the schools have an organized program to encourage home visits.
- The sending of newsletters and notes to parents still falls considerably below the degree to which it is considered a useful public relations technique.
- Parent - teacher organizations are widespread; other methods for drawing parents into the orbit of the school are less widely used.
- Class contacts with the community, generally acknowledged to be effective public relations devices, are still being fostered on a limited scale only.

Completed questionnaires were received from 3046 of the 5000 teachers queried, for a return of 61 percent.

CONCEPTS OF PROGRAM

Whether he is aware of it or not, the classroom teacher makes an impression on the public. For better or worse, this is public relations, and the teacher cannot avoid engaging in it. Some activities he may carry out purposely to foster good school public relations; in other cases, his normal classroom activities will have inevitable public relations results even though carried on with no such purpose in mind.

The nature and extent of the public relations activities consciously carried out by classroom teachers will depend very largely upon their concept of what the purposes of a school public relations program are.

Although teachers' concepts of school public relations are undoubtedly influenced by the concepts held by their principals, teachers' own views on this subject differed somewhat from their estimates of their principals' views. While only 6.6 percent of the teachers believed personally that public relations

For details see: National Education Association, Research Division. *The Classroom Teacher and Public Relations.* Research Monograph 1959-M2. Washington, D. C.: the Association, April 1959.

should try to "sell" the educational program, 14.3 percent considered this the view held by their principals.

Public relations was regarded as a means to "interpret" the program by 37.3 percent of the teachers, and 32.9 percent thought their principals regarded it in this light. Whereas 49.2 percent of the teachers thought public relations should encourage lay interest and "participation" in the school program, only 37.4 percent thought this was also the view of their principals.

ADMINISTRATIVE LEADERSHIP

The administration can do much to aid the classroom teacher in being an effective agent of public relations. Similarly, administrative policy can act to hamper needed contacts with parents. Fortunately, only 5 percent of the teachers reported that such contacts were hampered by the administrative policy of their schools.

In order to cope satisfactorily with questions and problems that might come up in the course of contacts with the public, teachers must be kept informed on school issues and policy by their principals. A total of 83.3 percent believed that this was being done satisfactorily. Teachers in small school districts were somewhat less satisfied with the degree to which they were informed than were teachers in large population centers. The number expressing satisfaction decreased with the size of the school district from 86 percent in the largest to 71 percent in the smallest.

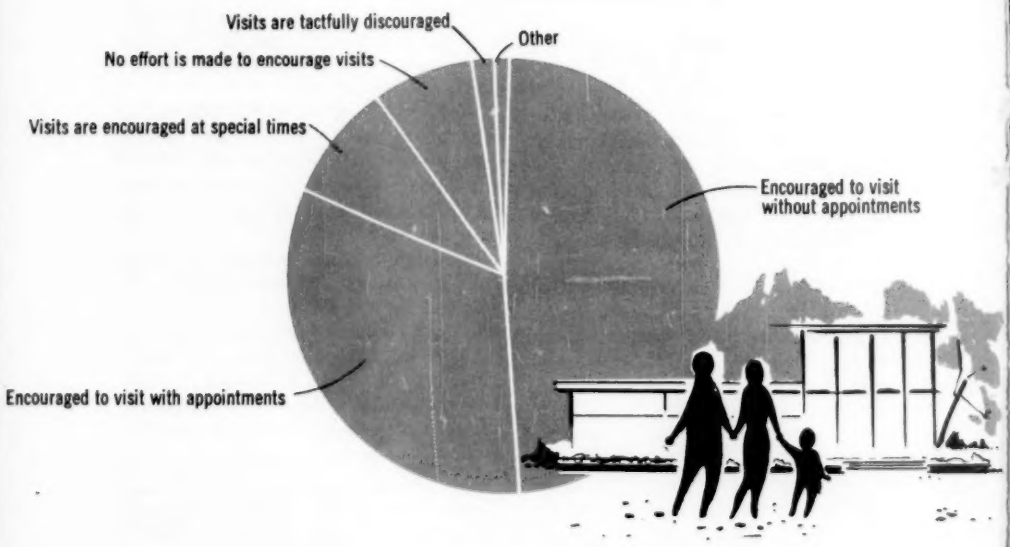
REACHING THE HOME

Some activities which are carried on by teachers and which have public re-

1 SCHOOL POLICIES ON VISITS OF PARENTS AND OTHERS TO THE SCHOOL

As Understood by Classroom Teachers

Percent of teachers


Visits are tactfully discouraged
Other
No effort is made to encourage visits
Visits are encouraged at special times
Encouraged to visit without appointments
Encouraged to visit with appointments

lations value are directed out into the community—chiefly to parents. The visit to the pupil's home is one of the most obvious ways in which to cement parent-school relations. Nevertheless, only 8.8 percent reported that their schools have an organized program to encourage such visits. Almost twice as many elementary schools as secondary schools have a policy of this sort in force.

In 68.0 percent of the secondary schools and in 40.4 percent of the elementary schools home visits and contacts with parents are generally left to guidance counselors. This is more frequently the practice in the larger school districts.

More than half of the teachers had not visited any homes during 1956-57. Teachers in the largest population areas reported making the fewest visits. Only 10 percent of all respondents had visited the homes of more than half of their pupils.

Approximately two-thirds of those expressing an opinion believed that the pupils like the practice. Very few (6.7 percent) of the teachers believed that their pupils dislike having the teacher visit their homes. About a third stated that the pupils have no definite attitude regarding the visits.

Almost twice as many women teachers as men teachers took an optimistic view of pupil attitude. It must be kept in mind, however, that this question did not measure pupil attitude, but teachers' opinions about the attitudes of pupils.

The sending of newsletters (giving general information about the work of a class or of the school as a whole) to parents, either by the teacher or by the class, was reported by only 31.7 percent of all respondents, more than twice as many in elementary as in secondary schools. But of those who do send newsletters, 95.8 percent consider them an effective method for promoting improved understanding of the school program.

Personal notes sent home with the report card also are an effective way to cement good public relations. These concern themselves almost exclusively with the individual pupil. A majority of the respondents, 53.4 percent, reported sending at least a few notes with the last report card. Almost twice as many elementary-school teachers use this technique as do secondary-school teachers. This is perhaps partly due to the greater tendency of elementary schools to use notes as their pupil progress reporting technique, and partly due to the much smaller number of different pupils whom they teach.

An inquiry into the proportion of notes complimentary to the pupil also revealed that elementary-school teachers scored higher than did secondary-school teachers. It seems obvious that commendations will do more to further good school public relations than would criticism.

WELCOMING PARENTS

Devices which aim at drawing laymen into the school are usually promoted with public relations ends in mind. The object is clearly to help the laymen know the school.

One of the most common of these techniques is the periodic "open house" or "parents' night." More than 9 in 10 teachers indicated the existence of such a practice in their schools. Such activities furnish an opportunity for parents and others to inspect the school, to talk with the teachers about the work and about individual children, and to become informed concerning general school policies and philosophy. This practice is equally common in elementary and in secondary schools.

Another obvious method of drawing parents and other lay adults into the school is through parents visiting the school and talking with the teachers at times other than the open-house programs. Different policies with regard to such visits were reported in different schools. About half of the teachers reported that their schools encourage visits at any time, without appointments. Others favor appointments or visits only at special times. Figure 1 illustrates the variety in school policies.

Teachers' attitudes differ slightly from the school policies on this subject. Visits without appointments would be encouraged by 45.3 percent of the teachers, and visits upon appointment by an additional 45.7 percent. The reservation of a special time for such visits would be preferred by 5.1 percent. In addition to these, 3.4 percent would make no effort to encourage visits to the school, and 0.5 percent would prefer tactfully to discourage any such visits.

Of all respondents, 70.7 percent believed that pupils like to have parents visit the school. Once again, more elementary-school teachers took an optimistic view; 86.7 percent thought pupils like it, whereas only 45 percent of the secondary-school teachers held that opinion. Fewer than 1 respondent in 10—most of them in secondary schools—believed that the pupils dislike parental visits to the school. About 20 percent thought the pupils had no definite feeling about the matter.

Regular parent-teacher conferences were used by 39.7 percent of the respondents to communicate with parents; 99.2 percent of those who hold such conferences felt that they contribute to better relations. Once again, it is much more common in elementary schools, where 55 percent reported using it, than in secondary schools, where only 18.4 percent do. Such conferences on a regular basis are, of course, almost impractical except as a part of an administrative program to that end.

More than three-fourths of the teachers with experience in conferring with parents who are highly critical of the school program believed that conferences are at least fairly effective in helping them develop a more positive attitude.

IN THE HOMEROOMS

In the homerooms of about two-fifths of the respondents, the parents have their own organization. Only 23.2 percent of the secondary-school teachers reported room-parent organizations, but the percent rises to 56.6 in elementary schools. More than 9 in 10 teachers with experience with this type of organization believed they exert a positive effect in developing better understanding between parents and teachers.

The school-wide parent-teacher organization is much more common, existing in 90.4 percent of the schools. It, too, was considered effective by 3 in 4 teachers. The comparison of teachers' opinions regarding these two types of parents organizations is found in Figure 2.

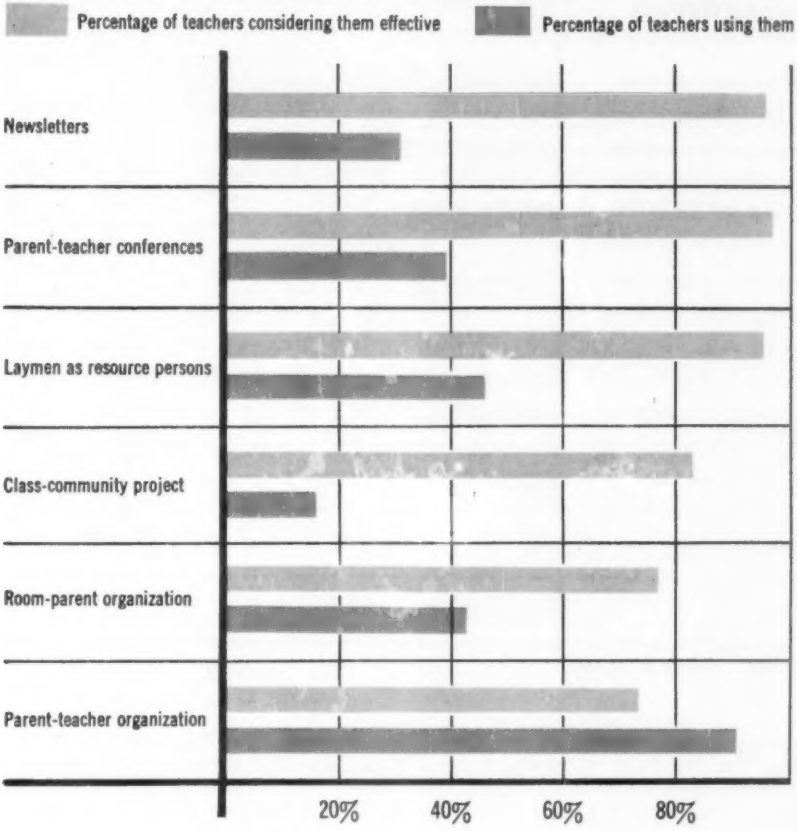
HELP FROM PARENTS

Generally, almost 3 teachers in 5 believed that parent participation in planning classroom projects or activities, which obviously has public relations value, has a good effect upon the instructional program. In addition to the effects on the classroom program, more than half of the respondents believed that inviting parent participation has a good effect, even upon those who do not participate personally, in bringing about more favorable attitudes toward the school. On the other hand, less than 30 percent had invited parents to help in this way. More than three times as many elementary-school teachers as secondary-school teachers reported having done so.

Some teachers enlist the help of parents in the performance of routine tasks involved in instructing their classes. Four in 5 of those teachers who reported such experience said they found it effective in the promotion of better public relations; 53.4 percent indicated that such parent assistance contributes either "much" or "some" to classroom activities.

One question asked concerned the number of parents teachers would recognize if they met the parents outside school. The median proportion of mothers recognized was 64.6 percent; the proportion of fathers recognized was considerably lower—21.3 percent. This might be expected, since the mother is more likely to have time available to participate in many of the school activities.

2 PUBLIC RELATIONS TECHNIQUES AND THEIR USE



COMMUNITY AND CLASSROOM

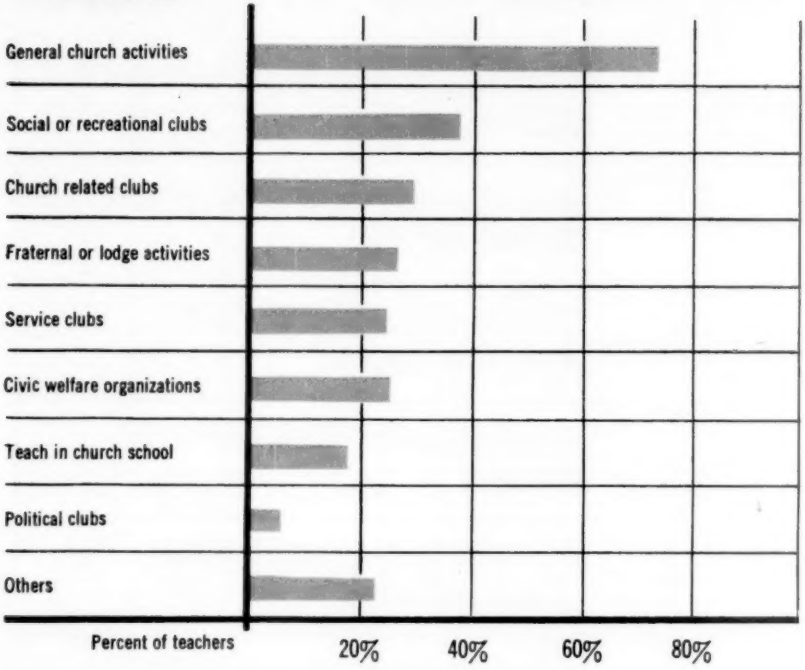
Schools can take advantage of the resources of the community in various ways, which in turn will contribute to school - community relations. Laymen with special knowledge or experience can be asked to participate in the class as resource persons. Almost 95 percent of the teachers consider this an effective public relations technique. But less than half ever issue such an invitation, and 83 percent had made fewer than two invitations of this type during the school year in progress. More than 90 percent of the respondents with this type of experience believed that lay resource persons make a contribution to the instructional program, aside from public relations concerns.

Classes can also engage in projects which will take them out into the community. Only 16 percent of the teachers reported that their classes were undertaking such a project, but of these 83.8 percent believed that they contribute appreciably to more effective public relations.

TEACHERS' ACTIONS

Many school activities are newsworthy, but for these to have good public relations value they must be

3 TEACHERS REGULARLY TAKE PART IN COMMUNITY ACTIVITIES



brought to the attention of the public. Teachers can help by writing reports on such activities for news media. But during the preceding year, 78.2 percent wrote no reports, and in addition 11.6 percent wrote only one or two.

Similarly, some classroom or school events which are particularly newsworthy should be brought to the attention of officials. During the preceding year, 52 percent of the teachers brought no events to the attention of appropriate officials, and an additional 24.6 percent of the teachers reported on only one or two.

In their private lives, teachers exert public relations influences by their contacts with members of the community. In general, teachers were found by this survey to be relatively active in a number of extraschool activities. The extent of this activity is outlined in Figure 3.

Teachers are often requested to address groups of laymen. During the preceding year 44.3 percent of the respondents made a speech to some lay group, and about one-fourth of the respondents had made at least two speeches.

KNOWING AND DOING

It is clear from the responses to this questionnaire that teachers know the importance of good public relations, and that they understand their role in fostering them. A comparison of what they actually do with what they think, however, reveals some significant discrepancies, as well as some significant agreements.

In many instances, teachers acknowledge the general effectiveness of particular school public relations techniques which they apparently would like to employ, but which for one reason or another they fail to use.

Better Schools Cost More

High-quality education is seldom found in districts with low levels of financial support

IN THIS period of high interest in our schools one point of special concern is this question: If we spend more, do we get better educational returns? There are better answers to this question than those based on folklore and opinion. They come from research that began as far back as 1920. The facts from this research are presented in summary form in answer to the following questions.

MAJOR QUESTIONS

- Do we get teachers with more preparation, better instructional materials, longer terms, and better attendance by spending more money for schools?
- Do pupils make higher scores on standardized tests in high-expenditure school systems than in low-expenditure systems?
- Do communities which spend more per pupil get schools with educational programs and procedures which take better account of the needs of society and of the findings of psychological research?
- Is there a point of diminishing educational returns in increasing the level of school expenditure?
- What is the relation of school quality to high or low school expenditure over a period of years?

LIMITATIONS

Before presenting the answers, it should be recognized that the definition and measurement of educational quality are in their beginning stages of development. But we know that regardless of how quality is defined, it is the result of many factors operating over considerable periods of time.

The school is one environmental factor influencing educational performance. So, also, are the home, church, press, radio, television, and other cultural elements. Then, too, the outcome of schooling is strongly affected by native ability and scholastic aptitude.

These relationships suggest that there are no easy answers to the questions posed. But there are facts which shed considerable light on the questions.

TEACHERS WITH MORE PREPARATION

Certain relationships are fairly easy to measure in quantitative terms, and these have been measured in several studies.

In 1920, Ayres reported a high degree of correspondence between the level of expenditure and such items as percent of school-age population attending school, length of the school term, average days attended by children of school age, high-school attendance as a percent of total attendance.

In 1926, Norton reported that in financially able states more money was spent per pupil, teachers were paid more, more money was expended on nonsalary items, and the school plant was superior. In these states, pupils attended school a greater number of days per year, more pupils went on to high-school education, and the teachers were better prepared.

Ferrell's study (1936) of 249 Kentucky school systems showed a strong relationship between quality and expenditure when quality was defined as the attracting and holding power of the school, the training and experience of teachers, the pupil-teacher ratio, and the length of the school term.

Later studies repeatedly confirmed the findings of the earlier inquiries which have been cited. This kind of evidence is of some value because it is likely true that better prepared teach-

For full citations on the research and for other details see: National Education Association, Committee on Tax Education and School Finance. *Does Better Education Cost More?* Washington, D. C.: the Association, March 1959. 45 p. 50¢. The original report was prepared for the Committee by John K. Norton.

ers and better instructional facilities result in better educational returns. But this was assumed rather than proved in the early studies. Accordingly, some research workers turned their attention more specifically to the problem of educational returns.

STANDARD TEST SCORES

Powell matched children by mental ability in low- and in high-expenditure schools in a study of pupil achievement conducted in 1933. The pupils were in one-teacher schools of a county in New York State. Powell found that pupils in high-expenditure schools were on the average 1.44 years advanced over those in the low-expenditure schools at the end of five years of schooling. He also found that pupils in high-expenditure schools were on the average superior to those in the low-expenditure schools in all nine different phases of pupil achievement which were measured.

In 1938, Grimm reported a study of educational opportunities in 24 elementary-school districts in Illinois, eight high-, eight middle-, and eight low-expenditure districts. On tests of achievement he found that the language scores of pupils improved with the cost level as did reading and arithmetic scores. He found also that high-expenditure schools offered more and better physical and health education, and more extracurricular activities, smaller classes, more opportunities in music, more books and better libraries, better trained teachers, more specialists, and better buildings.

At the high-school level, Bloom and Statler reported in 1957 an extensive study of factors associated with educational achievement as measured by the *General Educational Development Tests* in English composition, literature, social studies, natural sciences, and mathematics. Bloom tested 38,773 seniors in 834 high schools in 48 states in 1955 and the two investigators compared these results with those obtained by Lindquist in 1943 when he tested 35,330 seniors from 814 high schools in 48 states.

The following major conclusions were reached from this comparison:

- The differences among the states on the *GED* tests were as great in 1955 as in 1943 with the seniors in the lowest states at a great disadvantage when compared with the seniors in the top states.
- The differences were highly related to differences in financial support and in level of formal education of the adult population. However, the correlation between test scores and level of education of the adult population was not as high in either year as was the correlation between test scores and level of school expenditure.
- Performance of students in 1955 in a great majority of the states was better than the performance in 1943.
- Relatively speaking, the shift in the rankings of the states was related to the increases in financial support and in level of education of the adult population.

The foregoing studies show that students on the average make higher scores on tests in the three R's in elementary schools and in the academic subjects in high schools in high-expenditure as compared with low-expenditure school systems. But this finding, similar to that in the preceding section on teaching personnel and school facilities, does not tell us much about the quality of educational results. Other research workers have used more comprehensive measures in their quest for data on quality.

MORE COMPREHENSIVE SEARCHES

In 1938, Mort and Cornell selected 36 Pennsylvania communities for study of the relation between expenditure level and various other factors, including the promptness with which school systems adopt new and desirable educational practices. They found that, in general, money was more closely related to adaptability than to any other single factor.

Strayer directed a survey in West Virginia in 1945 in which 138 large elementary schools, selected as representative of three expenditure levels in

the state, were visited and rated on a check list of several hundred items designed to measure school quality. In schools of high-expenditure level, quality and breadth of the educational offering stood out in such elements as degree of concern with the child as an individual, use of tests, provision for pupils of low and of superior ability, and provision for handicapped children.

In another state, Mississippi, McLure reported in 1948 on the cost-quality relationship in more than 100 schools. Information was assembled from each school with reference to nearly 200 practices generally assumed to be essential for good education. The schools then were divided into three groups by expenditure level.

To summarize but one phase of the story, McLure concluded that schools that spend little money usually have unattractive buildings poorly suited for work, few supplementary books, almost complete absence of teaching supplies and laboratory equipment, the three R's poorly taught, and few activities for developing good citizenship. Next to expenditure level in influence on high educational returns, McLure suggested the importance of the picture, in the minds of laymen and educators, of what constitutes good education.

In 1954, the New York State Educational Conference Board carried on a study in which more than 5000 pupils were tested and in which about 500 persons observed classroom practices. On the basis of the information yielded by both sources the more than 100 school systems included were ranked in five groups as to test scores and provision for such educational objectives as health, good citizenship, ability to think, and development of individual pupil ability and talents.

Children from top-expenditure school systems at the sixth-grade level exceeded on the average those from the lowest-expenditure systems by a year and three months in arithmetic, a year and seven months in reading vocabulary, and a year and nine months in reading comprehension.

Generally speaking, the schools that had the most comprehensive programs for attaining the broader elementary-school objectives as well as achievement in the three R's were spending the most per pupil. These school systems were making better use of such facilities as books, radio, and television, and were making the study of music, art, and dramatics an integral part of the instructional program.

Another study was reported by Griffis in 1954 in which 44 school systems of southeast Texas were rated by direct observation on 100 modern educational practices in relation to three cost levels. He found that the higher cost level schools attracted better prepared teachers, gave increased attention to individual pupils, made use of more and better quality teaching aids, and usually had more functionally designed facilities.

RESEARCH IN PROGRESS

The New York State Education Department has under way a project for developing improved methods of assessing the quality of school systems. The first report of this Quality Measurement Project is based on a sample of 100 school systems of the state. As part of the project, 27,692 fourth-grade pupils were tested on the *Iowa Tests of Basic Skills* and 21,178 seventh-grade children were tested on the *Iowa Tests of Educational Development*. A second part of the project made use of the Mort-Vincent-Newell observational check list, *The Growing Edge*.

Some of the findings from the tests in this high per-pupil expenditure state were these:

- Fourth-grade children in 72 of 92 school systems made average scores higher than are standard on the Iowa tests.
- Seventh-grade children in 58 of 88 school systems made average scores higher than standard on Iowa tests.
- There was a significant positive relationship between the level of per-pupil expenditure for instruction and the test scores at both grade levels when parental and community in-

fluences on the educability of the pupils were eliminated by statistical techniques.

From the use of *The Growing Edge*, a considerable positive relationship was found between levels of educational expenditure and ratings by trained observers of general educational effectiveness.

In short, the Quality Measurement Project indicates that in New York State the high-expenditure school systems generally do a better job both in teaching the three R's and related skills and in providing a broad educational program characterized by instruction which capitalizes upon pupil initiative and participation.

In looking for the answer to why high-expenditure school systems achieve quality returns both in teaching the skills and in achieving broader objectives, the Project finds a number of factors involved. Apparently, the most important of these is that the high-expenditure districts have the money with which to employ teachers with more preparation. There is a closer relationship between expenditure level and amount of preparation of the teaching staff than between expenditure level and any other single measure of school quality.

In recent years, accompanying the foregoing general pattern of basic research, investigators have concerned themselves with certain special problems in measuring the cost - quality relationship.

POINT OF DIMINISHING RETURNS

Woollatt reported a study in 1949 that was especially concerned with whether a point of diminishing educational returns was reached in school systems at the highest expenditure level. Trained observers studied some 50 high-expenditure school systems in the metropolitan area of New York City.

Woollatt found that these high-expenditure schools were not only doing a superior job in teaching skills, but were also outstanding in emphasis placed on such highly important educational objectives as the development of good character, the stimulation of intellectual growth, and the development of ability to think. He concluded that spending more got more in educational returns in these school systems.

QUALITY OVER THE YEARS

In 1956, Furno reported a study concerned with the effect on school quality of the level of expenditure in a community over a 25-year period. He found that the maintenance of a high-expenditure level over a period of years influenced the quality of education available in a school district for a subsequent decade. One way this is brought about, Furno suggested, was that the odds favored superior teachers' being employed and retained in such school systems.

OBSERVATIONS

The facts as summarized in the foregoing paragraphs suggest:

- There is a factual basis for dealing with the relation between quality in education and its level of cost.
- The cost-quality relationship in education is complex and difficult to measure.
- The evidence now available on the effect of level of per-pupil expenditure on the quality of education is not final or complete, but it provides some valuable guidelines.
- A higher-quality education is generally provided in school systems which spend larger amounts on their schools.
- More money is not everything in obtaining quality education; it does not automatically produce better schools. On the other hand, high-quality education is seldom found in low-expenditure school systems.
- Greater excellence in education will be more fully achieved to the extent that we are able to identify and to bring to bear all factors, including money, on its development.

Educational Attainment in 1980

Nearly 6 in 10 adults will have a high-school diploma, and 1 in 10 will be a college graduate

PROJECTIONS of educational attainment, recently published by the U. S. Bureau of the Census, are of considerable importance to economists, educators, the government, and the public.

Gains will be made in the next 20 years in the proportion of adults who have completed high school only and also of those who have gone on to college. Over 42 percent of the adult population will have completed four years of high school or more in 1960 compared with only 24 percent in 1940. The study anticipates that by 1980, almost 58 percent will be so educated. Or stated more generally, almost 3 in 5 adults will have at least a high-school education.

1 MEDIAN SCHOOL YEARS COMPLETED, BY MAJOR OCCUPATION GROUPS, MARCH 1957

Major occupation group	*Median school years completed*
Professional, technical, and kindred	16.+
Clerical and kindred	12.5
Managers, officials, and proprietors	12.4
Sales workers	12.4
Craftsmen, foremen, and kindred	10.5
Service workers except private household	9.6
Operatives and kindred	9.5
Farmers and farm managers	8.6
Laborers except farm and mine	8.5
Private household workers	8.3
Farm laborers and foremen	8.2
Total employed	11.7

Based on:

U. S. Department of Commerce, Bureau of the Census. *Educational Attainment of Workers: March 1957.* Current Population Reports, Labor Force, Series P-50, No. 78. Washington, D. C.: the Bureau, November 1957. Table 7. Covers persons 18 years and over in the civilian noninstitutional population.

MORE COLLEGE GRADUATES

Less than 5 percent of the adult population held college degrees in 1940. By 1960 almost 8 percent are expected to have a college degree. By 1980 the proportion is expected to rise to over 10 percent. In addition, the proportion with some college education, but less than graduation, is also steadily rising.

The expectation is that the United States population in 1980 will include over 75 million persons who have completed at least four years of high school, more than four times as many as in 1940, and two and a half times the number in 1950. Before World War II, persons who had completed college numbered under 4 million and in 1950, under 5½ million. By 1980, there may be almost 14 million college graduates, 6 million more than in 1960.

These estimates of educational attainment cover adults 25 years of age and older and are based on recent projections of increasing population and on expectations of successively larger proportions of the population going on to complete higher levels of education.

NO LONGER A NATION OF EIGHTH-GRADERS

Equally significant is the projected decline in the proportion of persons with little or no schooling. The number of adults with eight years of schooling or less, which totaled 48 percent in 1950, is expected to drop to 39 percent by 1960 and to 22 percent by 1980.

As older persons with relatively little schooling leave our population, the median level of education in 1980 is expected to be 12.2 years as against 9.3 years in 1950. Or stated another way,

For details see: U. S. Department of Commerce, Bureau of the Census. Current Population Reports: Series P-20, No. 91; Series P-20, No. 83; Series P-50, No. 78.

it is expected that about half the population will have more than 12 years of schooling in 1980.

Progress in level of education attained by adults is obscured by the inclusion of older persons educated in past years. It is estimated that in 1980, almost 7 in 10 young adults (25 to 34 years old) will have at least completed high school, roughly twice the proportion of those 65 years old and older. On the debit side, however, the study anticipates during the next 20 years only a moderate decline in the proportion of high-school students who drop out before graduation.

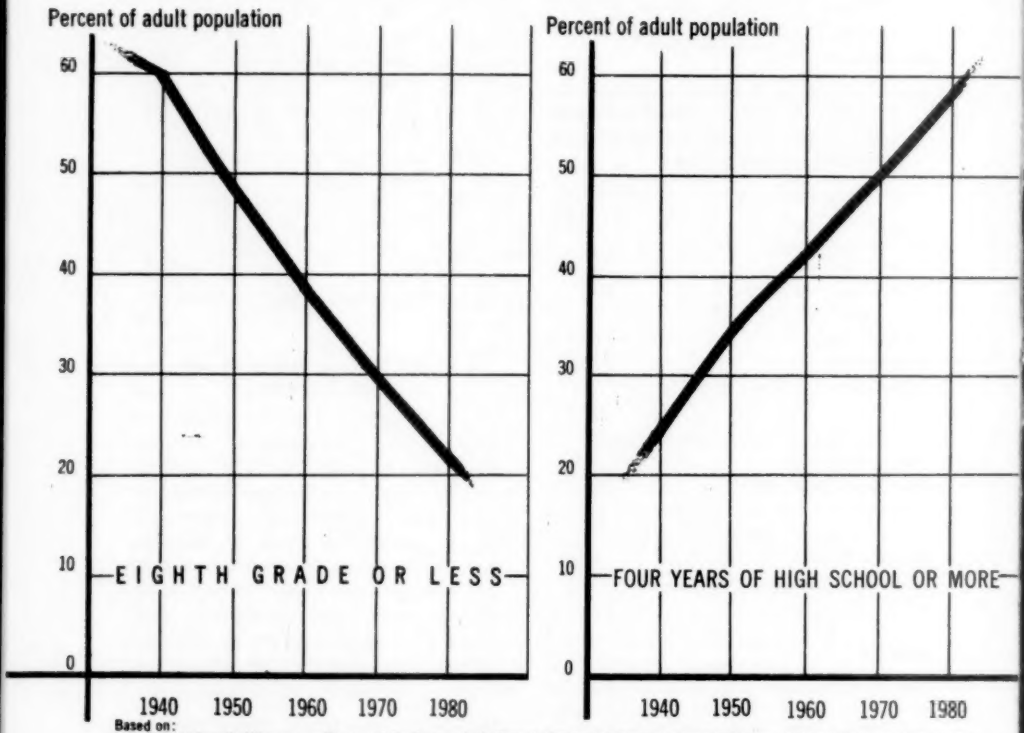
What do these projected higher levels of education mean to the nation in economic and social terms?

GATEWAY TO OPPORTUNITY

With more years of schooling, young people will find it possible to enter occupations otherwise closed to them. Among currently scarce professional, technical, and kindred workers, 75 percent have some college training. The proportion of persons in this field with less than a high-school diploma is, as might be expected, very small.

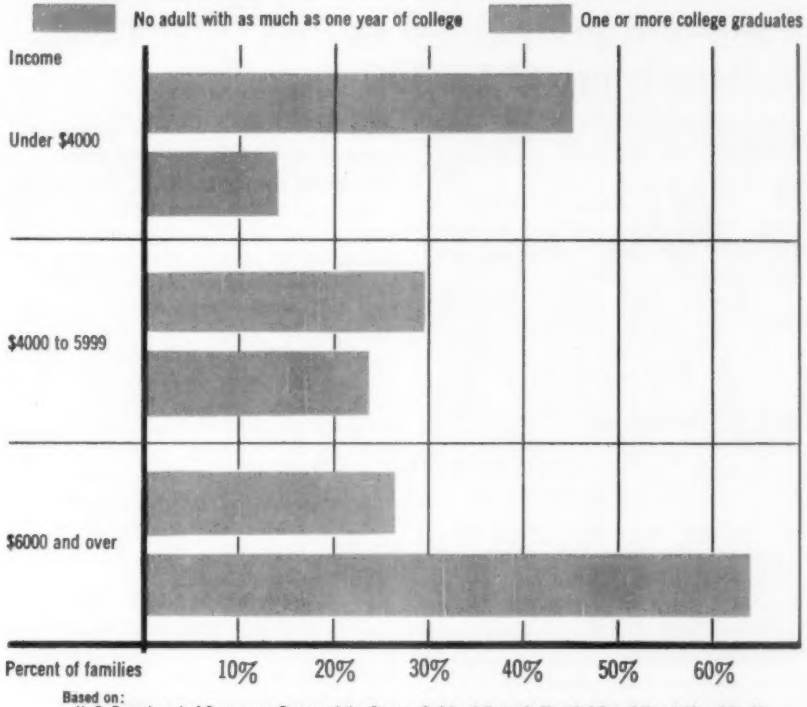
Persons with four years of high school or more form the largest nucleus of

2 TRENDS IN LEVELS OF SCHOOLING COMPLETED, 1940-1980



Based on:
U. S. Department of Commerce, Bureau of the Census. **Projections of Educational Attainment in the United States: 1960 to 1980.** Current Population Reports, Series P-20, No. 91. Washington, D. C.: the Bureau, January 1959. Table 2, p. 8-9. Series B data for 1970 and 1980. Adults include persons 25 years of age and over.
Data for 1940 from **1950 Census of Population**, Vol. II, **Characteristics of the Population, U. S. Summary**, Table 44. Persons not reporting on educational attainment distributed prorata.

3 INCOME OF FAMILIES WITH AND WITHOUT COLLEGE GRADUATES, 1956



Based on:
U. S. Department of Commerce, Bureau of the Census. **Social and Economic Characteristics of Households and Families, March 1957.** Current Population Reports, P-20, No. 83. Washington, D. C.: the Bureau, August 1958. Table D, p. 3.
Adults include persons 18 years of age and over.

workers in several major occupation groups: managers, officials and proprietors, and clerical and sales workers. Persons with less than four years of high school are concentrated in lower paying and less stable occupations such as semiskilled operatives and laborers. Unemployment is more prevalent among workers with relatively little education.

EFFECT ON INCOME

Family incomes should also be affected significantly. A survey of 1956 income, taken in March 1957, showed that among families in which no adult had completed even one year of college, some 19 percent had an income of less than $2000. Of those families which included one or more college graduates less than 4 percent were in this low income bracket.

On the other hand, 64 percent of the families with one or more college graduates were in the $6000 - and - over bracket as compared with only 26 percent of the families with no college-educated adult. Almost three-fourths of the families in which *all* adult members were college graduates were in the $6000-and-over bracket.

Teachers traditionally have been far above the adult population generally, in years of college completed. One of the many implications of this national upward trend in level of education is the necessity it imposes upon teachers for a longer and more comprehensive period of professional education.

FINANCIAL INCENTIVES FOR TEACHERS

Analysis of professional earnings shows that teaching is priced too low

THE AVERAGE salary for public-school teachers was $4792 for the calendar year 1958, a gain of 7 percent over the 1957 calendar year average salary of $4473. (These figures include classroom teachers, supervisors, principals, and other instructional personnel.)

In recent years salary increases, though substantially above increases in the cost of living, have done little to improve the economic status of teachers in comparison with other professional and nonprofessional occupational groups.

The solution to our national shortage of qualified teachers depends upon:

- Recruiting for career teaching a larger portion of our better-than-average youth than at present
- Retaining qualified teachers in the public school systems.

To date we have fallen far short of our needs on both counts: The evidence is that other employment for college-trained people offers greater financial rewards. A substantial number of trained, qualified teachers are drawn off yearly for other occupational pursuits.

The amount which a teacher can presently expect to earn over a lifetime of teaching in the public schools is little inducement for the ambitious, able, college-bound youth to enter teaching.

The supply of teachers is cut substantially each year by long breaks in the teaching careers of women teachers. The existing levels of teachers' salaries do not permit the qualified teacher-homemaker to arrange for adequate day care of her young children. Other teachers are permanently lost to the profession each year because other employers offer better salaries and opportunities for economic advancement.

Thus it is not amiss to look at the financial rewards for teaching and other occupational pursuits apart from personal and social considerations.

STARTING SALARIES FOR TEACHERS

New classroom teachers in 1958-59 commanded an estimated average starting salary of $3650. This average includes new teachers in rural areas as well as in urban areas, and new teachers with less than four years of college preparation or with college training in fields other than teaching. The average starting salary (the median of minimum salaries scheduled) for bachelor's degree classroom teachers in September 1958 was $4000 in urban districts of 30,000 to 100,000 population. For the same districts the classroom teacher beginning with a master's degree started at $4300.

STARTING SALARIES FOR ENGINEERS AND CHEMISTS

Professional associations of both engineers and chemists have recently surveyed first-year salaries for their respective professional groups. The 1958 beginning engineer got an average starting salary of $5850; the beginning chemist with a bachelor's degree, $5160.

THE ENDICOTT SURVEY

The thirteenth annual Endicott survey reported average starting salaries of college men graduates who were recruited by business and industrial companies. On an annual basis, the starting salaries for this select group of graduates are as follows by major field of employment:

For further details on teachers' salaries see: National Education Association, Research Division. *Analysis of Salary Schedules, 1957-58*, Research Report 1959-R1, January 1959, 31 p., 25¢; *Classroom Teacher Salary Schedules, 1958-59, Urban Districts 30,000 to 100,000 in Population*, Research Report 1959-R2, February 1959, 58 p., 50¢; *Economic Status of Teachers, 1958-59*, Research Report 1959-R3, April 1959.

- Engineers—$5664 for June 1958; $5760 estimated for June 1959
- Accountants—$5004 for June 1958; $5064 estimated for June 1959
- Sales—$4944 for June 1958; $5028 estimated for June 1959
- General business trainees—$4884 for June 1958; $4956 estimated for June 1959
- Other fields—$5196 for June 1958; $5256 estimated for June 1959
- Average of all fields—$5184 for June 1958; $5268 estimated for June 1959.

WOMEN COLLEGE GRADUATES

In a survey of the earnings of women college graduates of the class of 1956, average annual earnings of $3492 for the first year of teaching were slightly higher than the earnings of $3446 of all graduates. Several occupational groups of women exceeded teachers in average first-year salaries. These included chemists at $4453; mathematicians and statisticians at $4382; miscellaneous professional workers at $3979; research workers at $3819; home economists at $3803; therapists at $3733; nurses at $3647; and recreation workers at $3571.

First-year women teachers fared better in salaries than a number of other occupational groups of women, including social and welfare workers at $3440; dietitians at $3351; librarians at $3339; and editors, copywriters, and reporters at $3120.

ANNUAL EARNINGS

The average annual salary of teachers, including classroom teachers, supervisors, principals, and other instructional personnel, was estimated at $4473 for the calendar year 1957.

During the same year, 1957, all persons working for salaries and wages earned $4211, but employees in manufacturing earned $4781. Civilian employees of the federal government averaged $4971 per year. In other words, the average earnings of all persons working for salaries and wages was 94.1 percent of teachers' salaries, while employees in manufacturing averaged 6.9 percent above teachers. Civilian employees of the federal government averaged 11.1 percent above the average calendar-year salary of teachers.

The federal Civil Service Commission calculated the average salary of *white-collar employees* in the federal service in 1957 at $4753 with an average salary of $6867 for *professional employees* and an average salary of $4412 for nonprofessional employees.

EARNINGS OF DENTISTS

The American Dental Association has surveyed the income of dentists three times since 1950. According to the report of the 1955 income the mean net income of all ADA members was $12,418, compared with $8044 for nonmember dentists. In 1955, all nonsalaried dentists had a mean net income of $12,480. In 1955, the average annual salary of teachers was $4019.

PHYSICIANS' EARNINGS

The median 1955 net earnings of physicians were as follows: In general practice the average income of the salaried physician was $10,400; for the self-employed physician, $14,817. The salaried specialist earned an average of $12,490, while the self-employed specialist earned an average of $18,010.

LEVEL OF PROFESSIONAL INCOME

Spending units headed by professional and semiprofessional workers in our economy have mean total incomes somewhat below spending units headed by managerial workers and self-employed businessmen, but well above the mean incomes of spending units headed by other groups of workers, including clerical and sales, skilled and semiskilled, unskilled and service, and farm operators. (See Illustration 1.)

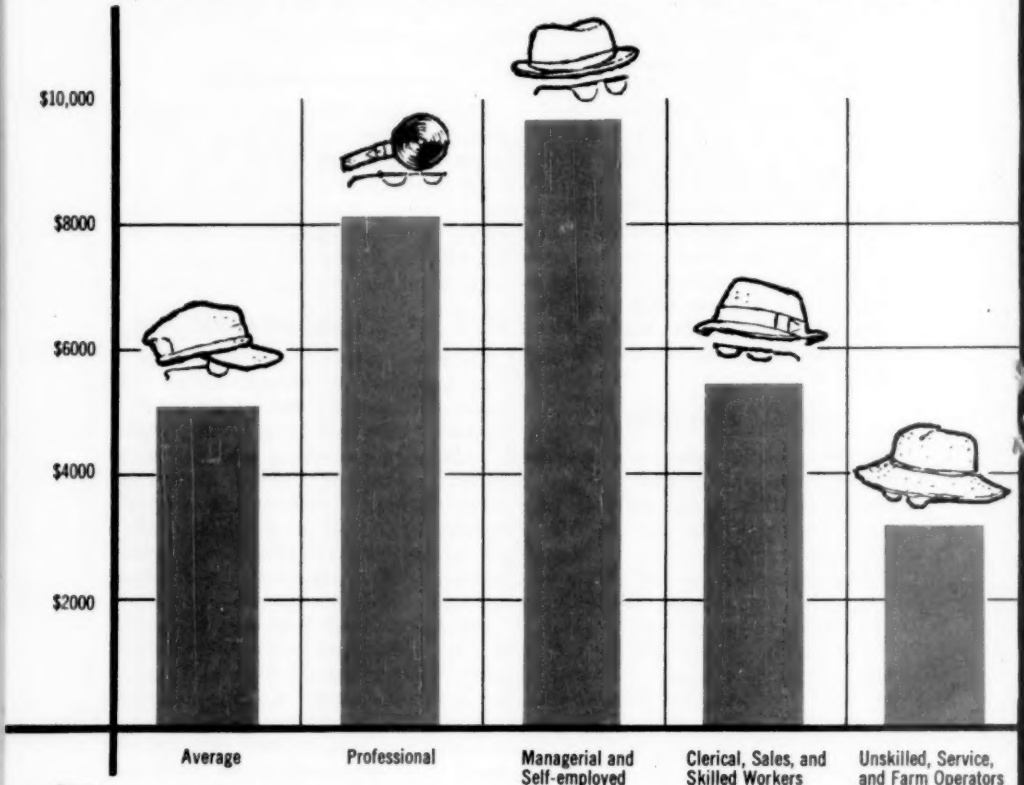
According to the 1957 annual survey of the financial position of consumers, made by the Federal Reserve Board, the average income of all spending units was $5160. The average income of spending units headed by professional and semiprofessional workers was $8150, or 58 percent higher than the general level of incomes.

The figures for the average annual income of spending units are not comparable to average annual salaries of teachers in two respects: The average income figure includes money received from all sources, wages and salaries, self-employment, interest, rent, etc.; also the income of spending units includes the earnings of all members of the spending unit classified by the occupation of the head of the spending unit.

For a number of years the Heller Committee has issued estimated family budgets for the San Francisco Bay Area for four-person families – man, wife, and two children – at different socioeconomic levels. The most recent, for September 1957, estimated the budget for a salaried junior professional and executive at $8885.

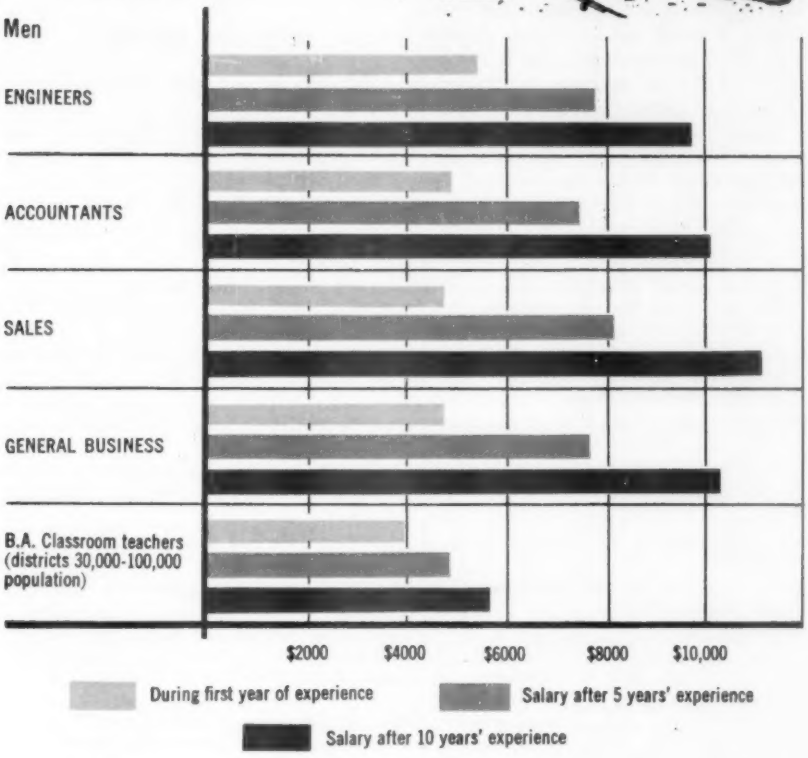
It is more than coincidence that the budget for the "junior professional and executive worker" of the Heller study and the mean income of professional and semiprofessional worker spending units are both somewhat over $8000. In 1956, the median family income for families headed by workers with at least four years of college was $7027; with five or more years of college the median family income was $8198.

1 INCOME OF SPENDING UNITS, 1957



Source:
Federal Reserve System, Board of Governors. "1958 Survey of Consumer Finances: The Financial Position of Consumers." Federal Reserve Bulletin 44: 1027-57; September 1958.

2 SALARIES PAID CLASSROOM TEACHERS AND GRADUATES IN OTHER FIELDS, 1957-58



Source:
Endicott, Frank S. Trends in the Employment of College and University Graduates in Business and Industry, 1958. Thirteenth Annual Report. Evanston, Ill.: Northwestern University, 1959. p. 5. Teachers' salaries are based on salary schedules of urban school districts.

The estimated average individual income in 17 professions for 1957-58 was about $7600, or 61 percent higher than the average salary of teachers ($4720) for the same year.

SCHEDULED SALARIES FOR CLASSROOM TEACHERS

For 1958 the average salary scheduled for classroom teachers fell far short of the professional-salary level. (To show figures for a calendar year, we combine figures reported for the two school years which are a part of the calendar year.) For school districts of 100,000 population and over, the average salary scheduled in the calendar year 1958 for bachelor's degree teachers was a minimum of $3839 and a maximum of $5980. For master's degree teachers the minimum was $4054 and the maximum was $6390. For school

HOW HIGH ARE PROPERTY TAXES

districts of 30,000 to 100,000 population the average minimum salary scheduled for bachelor's degree teachers was $3800 and the maximum was $5738. For master's degree teachers the average of the minimum amounts scheduled was $4050 and the maximum was $6200. For all urban school districts over 5000 in population, the schedules provided for an average of 12 increments at an average amount of $149.

Salary schedules have greatly improved over the years. However, the starting salary is still too low and the maximum salary falls far short of that which would afford a professional salary for the classroom teachers. (See Illustration 2.) In July 1958 the NEA Representative Assembly recommended a salary goal ranging from $6000 to $13,000 for classroom teachers.

A MAJOR FACTOR

Salaries are a major factor in determining choice of a career. Unless the American public can raise the salaries of teachers to a professional level, education will continue to lose talented and interested people to other fields.

For Further Information

American Dental Association, Bureau of Economics, Research and Statistics. *The 1956 Survey of Dental Practice*. Chicago: the Association, 1956. 56 p. (Reprinted from the *Journal of the American Dental Association*.)

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U. S. Department of Commerce, Bureau of the Census. *Income of Families and Persons in the United States: 1956*. Current Population Reports, Series P-60, No. 27. Washington, D. C.: Superintendent of Documents, Government Printing Office, April 1958. 47 p.

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HOW HIGH ARE PROPERTY TAXES?

State-local property tax receipts: 1957

State	Total property tax receipts (in thousands)	Property tax revenue per capita	Property taxes as a percent of personal income
Continental United States	$12,850,649	$75.46	3.7%
Alabama	64,085	20.27	1.5
Arizona	84,911	78.77	4.3
Arkansas	47,272	26.56	2.3
California	1,554,633	112.01	4.4
Colorado	159,251	95.76	4.8
Connecticut	233,706	103.00	3.7
Delaware	14,102	32.49	1.2
District of Columbia	52,766	64.35	2.5
Florida	239,795	56.97	3.2
Georgia	133,422	35.38	2.5
Idaho	50,059	77.61	4.8
Illinois	906,038	93.42	3.8
Indiana	351,004	77.88	3.9
Iowa	240,517	86.42	4.8
Kansas	215,237	102.49	5.6
Kentucky	119,605	39.30	2.9
Louisiana	109,568	35.74	2.3
Maine	74,694	79.55	4.8
Maryland	192,085	66.35	3.1
Massachusetts	587,303	121.67	5.2
Michigan	643,597	83.53	3.9
Minnesota	307,021	92.53	5.0
Mississippi	65,543	30.26	3.1
Missouri	244,064	57.59	3.0
Montana	73,559	109.63	5.8
Nebraska	141,844	98.71	5.4
Nevada	21,780	83.13	3.4
New Hampshire	54,852	95.73	5.2
New Jersey	623,417	110.99	4.4
New Mexico	29,575	36.38	2.1
New York	1,754,784	108.67	4.3
North Carolina	135,250	30.24	2.3
North Dakota	56,665	87.85	6.1
Ohio	678,169	73.67	3.3
Oklahoma	105,657	46.81	2.9
Oregon	148,607	85.26	4.4
Pennsylvania	588,824	53.48	2.5
Rhode Island	65,572	76.51	3.8
South Carolina	56,668	23.93	2.0
South Dakota	67,413	97.28	6.3
Tennessee	119,193	34.62	2.5
Texas	579,106	63.12	3.5
Utah	59,739	71.12	4.1
Vermont	29,928	80.89	4.8
Virginia	161,575	42.21	2.6
Washington	151,778	55.70	2.6
West Virginia	55,680	28.36	1.8
Wisconsin	369,462	95.69	5.0
Wyoming	31,274	98.66	4.9

Source: U. S. Department of Commerce, Bureau of the Census. *State and Local Government Finances in 1957.* 1957 Census of Governments Advance Releases, Series G-CGA-No. 8. Washington, D. C.: the Bureau, February 1959. p. 15-17.

TEACHER SUPPLY AND DEMAND

Supply for 1959 increases 11,000

A CONTINUATION of the general shortage at about the same level and a prospect of marked improvement in certain critical fields are the two features of the Twelfth (1959) Annual National Teacher Supply and Demand Report.

College seniors due to be graduated before next September with preparation for teaching in the public schools will be a little more numerous, but not enough to offset the larger number of elementary- and high-school students who will enroll. Thus the over-all situation will continue to be acute. And thus important relief will come only where, when, and if substantial increases raise salaries to a truly competitive level. It matters little if larger numbers of college graduates are qualified for the standard teaching certificate *if other employment opportunities pull them away from classroom service.* Low salaries, rather than lack of inherent interest in teaching, have been and continue to be the major cause of the chronic shortage. The new report makes clear that only the most favored communities can expect to have a comfortable supply of really qualified applicants next September. And many of these applications will be made by teachers now in the less favored districts.

CRITICAL FIELDS IMPROVE

The prospect for most meaningful improvement is in the areas of most acute high-school shortage—mathematics, science, and foreign languages. In the elementary schools, where the shortage of properly educated candidates has overshadowed all other needs through past years, the outlook remains grim. This year's report brings out these trends:

- The Class of 1959 promises to produce 47,490 prospective elementary-school teachers. This is an increase of 4.8 percent over the 45,318 produced in 1958.
- The Class of 1959 promises to produce 78,220 prospective high-school teachers. This is an increase of 13.2 percent over the 69,093 produced in 1958.
- The 1959 group will include 4723 prospective new teachers of mathematics, an increase of 37.1 percent over the 3445 produced in 1958.
- The 1959 group will include 6984 prospective new teachers of science, an increase of 27.8 percent over the 5467 produced in 1958.
- The 1959 group will include 2005 prospective new foreign language teachers, an increase of 23.2 percent over the 1627 produced in 1958.

On the surface, these substantial increases in the prospective supply of well-trained, up-to-date teachers of mathematics, science, and foreign language are encouraging. They are testimony to the foresight and resourcefulness of teachers who, long before the Russians mounted the first satellite, redoubled their efforts to stimulate the interest of students in these subjects.

The real test will come, however, when these new graduates distribute themselves among the occupational fields. The most up-to-date information available—the occupational choices of comparable graduates of 1958—indicates that only 75.8 percent of the new prospective teachers of mathematics, 69.0 percent of those in science, and

For further detail see: National Education Association, Research Division. *Teacher Supply and Demand in Public Schools, 1959.* Research Report 1959-R6. April 1959. One copy of the report is sent to each college and each school district. The distribution is made through the office of the certification officer in each state department of education because that officer is responsible for assembling the data from the colleges and local school districts within his state. Single copies are available without cost to high-school and college counselors upon request to the NEA Research Division as a part of the expanded program.

68.9 percent of those in the foreign languages will be found in the classrooms of the nation next September. The national report a year earlier showed that of those graduates of 1957 who were prepared to teach mathematics, 68.1 percent entered classroom service; of those prepared to teach science, 62.8 percent did so; and of those prepared to teach a foreign language, 65.4 percent were in teaching service the following September. Thus it becomes clear that the recent business dip called a recession brought only a small increase in the percent of new college graduates who followed through with actual applications for teaching positions. And this gain, of course, will be more than offset by the larger number of enrollees and the unmet need to organize more classes in these fields.

Summing up the high lights of the 1959 report, substantial relief from the

1 NEW SUPPLY OF TEACHERS TO COME FROM COLLEGES AND UNIVERSITIES IN 1959[a/]

Type of preparation	*Men*	*Women*	*Total*	*Percent change from 1958*
Elementary-school teaching:				
120 semester hours	6,147	41,343	47,490	+ 4.8%
90 semester hours	139	376	515	− 6.9
60 semester hours	624	3,967	4,591	−15.8
30 semester hours	54	365	419	−16.7
Elementary-school total	6,964	46,051	53,015	+ 2.3
High-school teaching:				
Agriculture	1,746	3	1,749	− 3.1
Art	906	1,618	2,524	+13.0
Commerce	2,893	4,044	6,937	+12.5
English	2,668	6,257	8,925	+15.8
Foreign languages	661	1,344	2,005	+23.2
Home economics	2	4,934	4,936	+ 7.9
Industrial arts	4,074	26	4,100	+ 8.2
Journalism	89	42	131	+20.2
Library science	38	389	427	+10.9
Mathematics	3,119	1,604	4,723	+37.1
Music	2,543	2,722	5,265	+ 1.5
Physical education (M)	7,697	....	7,697	+ 3.6
Physical education (W)	....	3,032	3,032	+ 9.8
Science	4,971	2,013	6,984	+27.8
General science	2,530	994	3,524	+32.7
Biology	1,573	763	2,336	+20.5
Chemistry	563	217	780	+26.0
Physics	305	39	344	+35.4
Social sciences	9,333	4,364	13,697	+17.4
Speech	741	1,268	2,009	+11.4
Other	1,610	1,469	3,079	+ 5.2
High-school total	43,091	35,129	78,220	+13.2
Grand total (not including non-college graduates)	49,238	76,472	125,710	+ 9.9

a/ Based on reports from all institutions in all 50 states, Puerto Rico, and the District of Columbia in which students may pursue the courses required for the standard teaching certificate.

teacher shortage still awaits the raising of salaries to truly competitive levels.

ELEMENTARY FIELD CONTINUES TO LOSE

Table 1 brings out the greatest weakness, next to inadequate financial support, in the attack upon the teacher shortage: the imbalance between the total number of college graduates prepared for elementary-school and the total number prepared for high-school teaching. The NEA Research Division estimates that the current teaching corps consists of 809,196 elementary- and 482,733 high-school teachers. This means that about 8 of every 13 teachers are in elementary-school classrooms. Moreover, the replacement requirements of elementary-school teachers are much higher. Almost 3 of every 10 are not college graduates; many do not have a sincerity of interest in teaching as a life occupation; they drop out of service to enter other occupations, to resume college attendance, to assume household duties, or for other reasons.

Over all, the need for new elementary-school teachers is in the ratio of 5 for each 3 new high-school teachers needed. In round numbers, however, the new supply reverses this ratio: In 1959, the prospective new elementary-school teachers will number only 47,490, while at the high-school level the total will be 78,220. Stated another way, the prospective new crop equals only 5.9 percent of the 809,196 elementary-school teachers now in service, while the oncoming group of prospective high-school teachers is equal to 16.2 percent of the 482,733 now in service.

RATIO REMAINS UNFAVORABLE

At no time in the past has this ratio of new teachers produced by the colleges been in balance with the ratio in the total staff in service in the nation. Beginning in 1951, the ratio steadily improved each year through 1955. Since 1956, however, the trend has been in the unfavorable direction. Despite improvement in standards and the further application of the single-salary schedule, the appeal of the elementary-school classroom has failed to keep pace with the increase of total numbers of college graduates prepared for public-school service. Here are the ratios since 1950:

Year	*Ratio of new high-school to new elementary-school candidates*
1950	3.04 to 1
1951	2.16 to 1
1952	1.63 to 1
1953	1.44 to 1
1954	1.33 to 1
1955	1.32 to 1
1956	1.39 to 1
1957	1.48 to 1
1958	1.63 to 1
1959	1.58 to 1

The present ratio—1.58 to 1—is, of course, a great improvement over the gross imbalance in 1950—3.04 to 1—but the needs of the public schools next September will be in just about the reverse of the manner in which the 1959 graduates are divided.

STRONGER COUNSELING NEEDED

Each student should, of course, be helped to find the field of his greatest occupational interest and aptitude. But is each student interested in teaching fully informed about (a) the number of likely openings in his chosen field and (b) the prospective number of college graduates with similar qualifications and occupational ambitions? If a fair share of all students interested in teaching are to be prepared for the field of greatest need, the elementary-school classroom, it seems clear that we have not fully met our responsibilities all along the line in our counseling with these young students who are making vitally important choices.

STATE-BY-STATE INCREASE

Not all states will enjoy an increased supply of prospective new teachers in 1959 over the 1958 total. The new group for elementary-school teaching will be smaller in Alabama, Alaska, Arizona, Arkansas, Colorado, District of Columbia, Hawaii, Kansas, Louisiana, Maine, Maryland, Massachusetts, Mis-

2 NUMBER OF QUALIFIED GRADUATES OF 1958, BY TYPE AND ACCREDITATION OF INSTITUTIONS PRODUCING THEM

Type of institution	Graduates of accredited institutions		Graduates of nonaccredited institutions	
	Number	Percent	Number	Percent
Prepared for elementary-school teaching in:				
Public teachers colleges	9,222	94.4%	547	5.6%
Nonpublic teachers colleges	602	61.9	371	38.1
Public general colleges	6,420	64.8	3,488	35.2
Nonpublic general colleges	2,094	21.6	7,615	78.4
Public universities	8,573	83.6	1,677	16.4
Nonpublic universities	2,596	55.1	2,113	44.9
Total	29,507	65.1%	15,811	34.9%
Prepared for high-school teaching in:				
Public teachers colleges	11,883	99.7%	37	0.3%
Nonpublic teachers colleges	248	97.6	6	2.4
Public general colleges	10,191	64.8	5,536	35.2
Nonpublic general colleges	2,014	13.0	13,434	87.0
Public universities	15,472	83.0	3,178	17.0
Nonpublic universities	3,944	55.6	3,150	44.4
Total	43,752	63.3%	25,341	36.7%

souri, Montana, Nebraska, South Dakota, Tennessee, Utah, Vermont, Virginia, and West Virginia. None of these losses, however, will exceed 100 new prospective candidates.

The largest increase will be in New York, followed by California, Illinois, Michigan, Texas, Oklahoma, New Jersey, Ohio, Connecticut, and Pennsylvania, in that order. These increases range from 618 to 109. In each of the other states the increase will be less than 100.

For high-school teaching minor losses (only one exceeding 100) are reported by Delaware, Nebraska, Ohio, and Wyoming. The largest increase, 1485, will be in New York. No other state will produce as many as 500 more prospective high-school teachers in 1959 than in 1958.

COLLEGE ACCREDITATION SHOWN

The 1959 report contains detailed information concerning the various types of institutions producing new teachers, and also the extent to which these institutions are accredited by the National Council for the Accreditation of Teacher Education, as shown in Table 2. For elementary-school teaching, teachers colleges produced 10,742, or 23.7 percent, of the total. General colleges produced 19,617, or 43.3 percent, while 14,959, or 33.0 percent, came from universities. Of the total, 29,507, or 65.1 percent, came from institutions accredited by NCATE. This distribution varies only a little from the 1956 report (the first to include these facts) covering the graduates of 1955. Of the 1955 group prepared for elementary-school teaching, 23 percent were produced by teachers colleges, 48.3 percent by general colleges, 28.7 percent by universities. The proportion coming from teachers colleges has remained constant at just over 1 of every 5 despite the fact that several teachers colleges have been converted to general colleges during the past three years.

For high-school teaching, teachers colleges produced 12,174, or 17.6 percent, of the total. General colleges produced 31,175, or 45.1 percent, while 25,744, or 37.3 percent, came from universities. Of the total, 43,752, or 63.3 percent, came from institutions accredited by NCATE. As at the elementary-school level, the distribution of new prospective high-school teachers among the three types of institutions varied only a little from three years ago. In 1955, the teachers colleges produced 18.4 percent; general colleges, 42.0 percent; and universities, 39.6 percent.

STATES VARY WIDELY IN NCATE ACCREDITATION

The influence of the National Council varies widely from state to state in its effort to assure the quality of the teacher education program. Here are the 10 states at the top and the 10 at the bottom of the percentage scale in the extent to which new *elementary-school* teachers are coming from NCATE-accredited institutions.

State	*Number in 1958 class*	*Percent from institutions accredited by NCATE*
Montana	216	100.0%
Wyoming	44	100.0
Utah	669	98.5
North Dakota	60	96.7
Connecticut	548	90.5
Kentucky	843	90.4
Minnesota	1,198	88.1
District of Columbia	129	86.0
New York	3,787	84.8
Kansas	731	84.1
ALL STATES	45,318	65.1
Louisiana	1,152	38.2
Vermont	173	34.1
Mississippi	634	30.4
Virginia	622	15.9
Maine	276	10.9
South Carolina	515	0.0
Nevada	21	0.0
Hawaii	119	0.0
Delaware	72	0.0
Alaska	26	0.0

A similar situation exists with respect to the production of new *high-school* teachers as shown by the following list of the 10 high and 10 low states.

State	*Number in 1958 class*	*Percent from institutions accredited by NCATE*
Wyoming	118	100.0%
Utah	850	98.5
Montana	457	95.8
Michigan	3,283	84.8
Kansas	1,380	84.6
Kentucky	1,272	82.9
New Hampshire	185	82.7
Oklahoma	1,662	81.3
Wisconsin	1,794	80.5
Nebraska	1,054	79.0
ALL STATES	69,093	63.3
Mississippi	1,149	36.8
North Carolina	2,212	36.5
Virginia	1,043	19.8
Rhode Island	197	17.3
Oregon	736	14.4
South Carolina	1,078	0.0
Nevada	53	0.0
Hawaii	50	0.0
Delaware	71	0.0
Alaska	5	0.0

Although it is an independent, nationally recognized organization, NCATE has been sponsored from its beginning by the National Education Association. The NEA actively supports the extension of NCATE's services to other institutions engaged in the preparation of teachers, as it becomes possible for the institutions to meet the Council's requirements for professional approval.

IMPROVEMENT IN PREPARATION OF ELEMENTARY-SCHOOL TEACHERS

Without question, the greatest postwar achievement in American education has been a dramatic upgrading of the entire corps of elementary-school teachers. The typical teacher today has more than one full year of college preparation beyond that of the typical teacher 10 years ago. This has been achieved despite the impact of an enrollment increase from 17,341,000 to 24,341,000.

This progress has not been at a uniform pace among the states. A few states

3 PREPARATION OF ELEMENTARY-SCHOOL TEACHERS NOW IN SERVICE IN 43 STATES AND AREAS, 1958-59

State	120 or more hours	60-119 hours	Less than 60 hours	Total number of teachers
Alabama	82.6%	13.4%	4.0%	15,489
Alaska	86.4	12.1	1.5	1,349
Arizona	98.4	1.6	—	6,894
Arkansas	71.3	27.7	1.0	7,770
California	90.9	8.9	0.2	68,461
Colorado	84.0	15.5	0.5	8,674
Connecticut	83.9	15.5	0.6	11,166
Delaware	80.9	14.0	5.1	1,755
District of Columbia	85.2	13.7	1.1	2,299
Florida	97.8	2.2	a/	17,917
Hawaii	77.3	22.7	—	2,516
Illinois	73.9	23.9	2.2	43,193
Indiana	80.2	19.0	0.8	20,280
Iowa	28.0	57.1	14.9	12,167
Kansas	66.2	33.2	0.6	15,087
Kentucky	48.1	42.4	9.5	15,415
Louisiana	85.8	13.2	1.0	14,750
Maine	38.9	49.8	11.3	5,199
Maryland	73.6	22.9	3.5	11,461
Mississippi	67.1	28.4	4.5	10,429
Missouri	76.1	21.2	2.7	19,913
Montana	41.5	56.0	2.5	4,445
Nebraska	27.7	43.1	29.2	9,032
Nevada	68.8	30.3	0.9	1,516
New Hampshire	48.1	46.5	5.4	2,291
New Mexico	96.0	4.0	—	5,152
North Carolina (White)	89.9	9.4	0.7	18,783
North Carolina (Negro)	99.0	1.0	—	7,562
North Dakota	14.6	58.9	26.5	3,499
Ohio	67.3	31.3	1.4	38,730
Oklahoma	99.6	0.4	—	11,401
Oregon	81.2	18.4	0.4	10,501
Puerto Rico	21.7	62.1	16.2	8,400
South Carolina	86.9	11.7	1.4	12,895
South Dakota	11.8	49.7	38.5	5,771
Tennessee	67.0	30.5	2.5	17,750
Texas	95.6	4.1	0.3	46,680
Utah	91.8	7.7	0.5	4,575
Vermont	47.0	46.3	6.7	1,961
Virginia	61.7	28.5	9.8	17,740
Washington	83.2	16.8	—	12,850
West Virginia	68.4	24.9	6.7	10,383
Wisconsin	55.6	42.3	2.1	17,626
Wyoming	57.2	41.4	1.4	2,502
All teachers	75.3%	21.4%	3.3%	584,229

a/ Less than 1/10 of 1 percent.

4 PREPARATION OF ALL ELEMENTARY-SCHOOL TEACHERS IN CERTAIN STATES, BY SEMESTER HOURS OF CREDIT, ANNUALLY SINCE 1949

Year	Number of states participating a/	120 or more hours	60-119 hours	Less than 60 hours	Total number of teachers
1948-49	23	49.07%	34.02%	16.91%	221,787
1949-50	37	46.71	36.57	16.72	335,619
1950-51	39	48.85	35.36	15.79	377,331
1951-52	36	54.65	33.44	11.91	369,146
1952-53	30	60.44	31.23	8.33	346,092
1953-54	35	64.72	28.70	6.58	434,894
1954-55	32	67.62	26.26	6.12	468,445
1955-56	34	69.33	24.95	5.72	478,105
1956-57	41	69.59	25.31	5.10	524,542
1957-58	42	71.09	24.59	4.32	548,501
1958-59	43	75.29	21.36	3.35	584,229

a/ Not exactly the same states participated each year. Several state offices cannot complete this study until the close of the academic year. The list of states participating in this part of the study each year is shown in the Annual National Teacher Supply and Demand Report for that year.

had already brought a predominant majority of their elementary-school teachers to the bachelor's degree status. In a few states only a small minority now hold the degree. But the over-all progress is a monument to the persistent drive toward professional status under the leadership of national and state teachers associations.

Table 3 shows the highly irregular manner, state by state, in which the profession has moved forward. In one state as many as 99.6 percent of all elementary-school teachers are college graduates. Not shown in the table is the fact that 1 of every 3 in this state holds the master's degree. Hawaii takes first place with 53.7 percent of its elementary-school teachers holding the master's degree, as this level of preparation has been the state's minimum standard for beginning teachers for several years.

Table 4 shows the manner in which year-by-year progress has been made. The figures presented are from a changing group of states, and illustrate the need for augmented statistical services in some of the state departments of education where it has not yet become possible to make this analysis of the educational accomplishments of all teachers in service.

Several states have climbed into the 80-90 percent bracket, but Table 4 tells a tragic story, too. It shows that in some states the concept is not yet generally accepted that the elementary-school teacher must be a broadly educated person. And even more tragic is the fact (shown specifically in the full report) that in one state near the bottom of the scale the newly employed teachers are below the prevailing level of all teachers already in service in the elementary schools.

State Rankings and National Trends

Individual state "measures" dramatize the complexities of public education

WHAT effort the United States is making in its drive to prove that mass education will pay off in intellectual leadership is documented in the latest edition of the Research Division's popular perennial, *Rankings of the States.*

A point of departure in weighing and measuring the many tables that "rank" the states is to look at the nation's educational attainment profile, as projected by the U. S. Bureau of the Census in 1957, backtrack to state differences in these particular measures in 1950, note the problems which states face in providing education, and consider the inherent difficulties in judging what an individual state is achieving.

This was the 1957 national level of education:

- Of those 25 years of age and over (the adult population) 6.6 percent had had less than five years of schooling.
- Half of this age group had gone as far as grade 10.5.
- Over one-quarter of this population segment had had four years of high school.
- Four or more years of college had been achieved by 7.5 percent of them.
- Between 1940 and 1950 the percentage of adults with less than five years of education decreased by 18.5 percentage points. Between 1950 and 1957 it further decreased by 4.4 percentage points.
- This statistical rise in literacy was accomplished through death and taxes. The educationally deprived older people in our national community diminished in number. Younger age groups had been provided with broader opportunities in public education.

WHAT GAINS FOR 1960?

These are national figures. State data for these particular measures still rest on the results of the 1950 Census. What comes out of the 1960 enumeration will undoubtedly show changes. At that time we can expect answers to two pertinent questions: How much further has the national educational level risen? Will state and regional differences have been ameliorated?

PRESENT STATE DIFFERENCES

Present state differences may not be ignored. Neither may they be interpreted without encountering perplexities and complications.

Take the matter of adults without as much as five years of school—the "functional illiterates." In Iowa fewer than 4 percent fell into this classification in 1950, but well over 28 percent of Louisianans—a short distance south as the continent goes—similarly classify.

Statistically, educational leadership ought to come from Utah. Her 1950 citizenry had reached a 12.0 median years of educational level.

As a natural corollary, the Mormon plains appear to proliferate with high-school graduates. Almost one-half (48.9 percent) of its people 25 years old and older had finished four or more years of high school. Fewer than 1 in 4 had traveled that far in 10 states.

The collegiate ranks were high in California. Eight percent of her 25-and-overs had completed four or more years of college. This compared with the 3.1 percent of Arkansans who had achieved similar academic distinction.

Alaska demonstrated the greatest apparent bootstrap educational surge. In this new state's 1940-50 *territorial* decade the numbers of those with less than five years of school decreased by a phenomenal 50.8 percentage points.

For details see: National Education Association, Research Division. *Rankings of the States.* Research Report 1959-R4. Washington, D. C.: the Association, March 1959.

This reflected the increasing tempo of American mobility, for already low-ranking Iowa whittled down its "illiterates" by less than 5 percentage points during the same 10 years. And the education level changes—state by state and nationally—which the 1960 count will document, will in all probability show the effects of a still increasing mobility.

NEWER DATA SHOW TRENDS

Increasing school opportunity for younger age groups affects later data. By 1955-56 almost 65 percent of those who had been enrolled in the eighth grade four years before had become high-school graduates. This is the national record, and it demonstrates a secondary-school enlistment and holding power peculiarly American. So, appropriately, mid-continent Wisconsin topped all state rankings—over 93 percent of her 1951-52 eighth-grade graduates finished high school. In this state, at least, the common goal had become an educational commonplace. Other regions were less fortunate. In five states it was less than 50 percent.

COSTS OF LIFTING EDUCATION

Taking greater numbers of school-age children through higher and higher levels of educational attainment takes increasing sums of money—for 49 states and the District of Columbia an average estimated $340 will be spent for current operating expenses for each child in the public-school classrooms in 1958-59. This amount foots the bill for an aggregate 34.8 million which encompasses state-by-state enrollments from Alaska's 40,000 to California's 3 million.

But averages are deceiving. While a New York State youngster is receiving the benefits of a $535 program, his fellow junior citizen in one state must make do with what $164 will buy in the contemporary market.

VARIATIONS IN REVENUE SOURCES

No two states follow the same pattern of locating revenue from local, state, and federal sources. Lumped nationally it would appear that schools, generally, derive dollars thus: 56.2 percent from local sources (by and large the property tax), 40.8 percent from state sources, and 3.0 percent from the federal government's random support to public education.

Looked at individually, the states belie the concept of a nation. Local government finds almost 90 percent of Nebraska's school support. In Delaware the state pays for 88.2 percent of the load. (These are 1957-58 figures.) But discount Delaware as a county-state anomaly and note that highest proportionate state school support comes from New Mexico, Alabama, Georgia, Louisiana, North Carolina, South Carolina, Tennessee, and Florida—in each instance over 60 percent of the budget. Meantime, New England and the Middle West favor local support of schools—89.5 percent in Nebraska, 87.3 percent in New Hampshire, 84.7 percent in Iowa, 70.4 percent in Massachusetts, and 69.1 percent in Ohio. The two seaboards—Far West and Middle Atlantic—cluster around the midpoint.

INCREASES IN SCHOOL REVENUE

For the nation as a whole the percent of public-school revenue from federal sources was almost static between 1954 and 1958.

In the four-year 1954-58 period, states increased school revenue by 64.8 percent, local governments by 46.2 percent. Connecticut led all states in upping state-garnered school support by some 258.0 percent and simultaneously reached number two position with a 109.8-percent increase in local-government school support.

In this same period, Delaware, heaviest of all state-wide school contributors, raised state funds by only 10.4 percent, while Nebraska upped state revenues by 24.6 percent.

PUPIL COSTS VS. TEACHER PAY

Generally, high pupil-expenditure states tend to pay higher teachers' salaries. But the vagaries of population density, district organization, and the percentage of school-age population at-

tending public schools severely dent this correlation in marked instances.

For example, the estimated average salary of classroom teachers now runs from $3070 in Mississippi to $6400 in Alaska, with a national level at $4775. However, 24th ranking South Dakota in pupil expenditure ($333) is currently in 45th position in teacher pay—$3400. Wyoming has fourth highest per-capita costs—$435—while teachers there get the 30th place average salary of $4300. Contrariwise, Florida now ranks number 16 in teachers' salaries and 34 in pupil costs. Though individual states are making extraordinary efforts to buy high-quality education in terms of pupil costs, they are not necessarily competing in the market for quality teachers.

POPULARITY OF PUBLIC SCHOOLS

The popularity of a state's public school system confounds state comparisons and compounds its problems of school finance. Almost 83 percent of the nation's school-age children now attend public schools.

But the incidence of private schooling varies. In Nevada almost every child is in a tax-supported school—98.7 percent of the school-age population, in fact. Yet Rhode Island's taxes pay for the education of only about 69 percent of her children. Nevertheless Nevada currently pays more per child and more per teacher than does Rhode Island. At the same time New York, educating under 75 percent of her children in public schools, spends the most of all states on each of them and stands just under "atypical" Alaska in teachers' salaries.

INDIVIDUAL STATE EFFORTS

The state rankings show, however, that some states have gone far beyond others in finding revenue for improving their schools. Between 1957-58 and 1958-59, Mississippi jumped instructional staff salary averages by an estimated 18.7 percent. For 49 states the average was 4.6 percent.

Other states also made substantial efforts. In 1957-58 the people of Washington State forked up 5.4 percent of their personal income payments for state and local public-school revenues. They were closely followed by Utah at 5.2 percent, Louisiana and Oregon at 4.5 percent, while Massachusetts at the end of the scale was getting by with an outlay of 2.1 percent.

ENROLLMENT VARIATIONS

Differences in rates of enrollment increase further complicate individual state problems of meeting school needs. Also, they are evidence of where the tides of a mobile population are running throughout the nation. For example, while nationally the public schools increased enrollment by 41.5 percent in the 1948-49 to 1958-59 decade, state differences ranged from 6.0 percent in Mississippi to 295.1 percent in Alaska during the same period of time.

Five states—Florida, Arizona, California, Maryland, and Delaware—jumped enrollments by over 70 percent. In seven states—Maine, Alabama, Iowa, Oklahoma, Kentucky, North Dakota, Arkansas, and West Virginia—the increase was under 20 percent. Greatest enrollment increases and subsequent greater demands for school dollars tended to occur in wealthier states, the reverse in poorer states.

GUIDELINES

The 50 states and the District of Columbia show extreme ranges in any single measure of the complexities of public education which may be applied. No single measure is an adequate basis for judgment, and even combinations of measures afford tentative generalizations at best. Taken together, however, they do afford insights into areas of adequacy and areas of deficiency and point desirable directions to travel in the drive for quality education.

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